

[0073] First, the farm field acquisition unit 34 acquires information of the farm field for which the second auxiliary lines are created (S201).

[0074] Next, the reference auxiliary line creation unit 36 creates the second reference auxiliary line 91, which is distant (offset) outward from the work area peripheral edge by the second reference interval T2 (S202). Therefore, the second reference auxiliary line 91 is parallel to the work area peripheral edge (basically parallel to the farm field peripheral edge as well). Further, the second reference auxiliary line 91 is created for each side of the work area peripheral edge. Further, as illustrated in FIG. 10, the second reference interval T2 corresponds to the value obtained by subtracting the overlap amount R from $\frac{1}{2}$ of the work width W1 or the value obtained by adding the work interval D to $\frac{1}{2}$ of the work width W1. Accordingly, the work can be started from an appropriate position outside the work area. Therefore, even if the work is performed while traveling in the headland area, the work will be performed only in the headland area and basically will not protrude into the work area.

[0075] Next, the adjacent auxiliary line creation unit 37 creates a second adjacent auxiliary line 92, which is distant (offset) outward from the second reference auxiliary line 91 by the auxiliary line interval S (S203). Therefore, the second adjacent auxiliary line 92 is parallel to the second reference auxiliary line 91.

[0076] The adjacent auxiliary line creation unit 37 creates zero, one, or multiple second adjacent auxiliary lines 92. The specific creating number is as follows. That is, the number of second auxiliary lines to be created for one side of the farm field peripheral edge (that is, the total number of second reference auxiliary lines 91 and second adjacent auxiliary lines 92 to be created) corresponds to the value obtained by rounding down the decimal places of the headland width L divided by the auxiliary line interval S. By rounding down the decimal places, it is possible to keep a constant work pitch while preventing the work from being performed outside the farm field although there is a possibility that a remaining work occurs. Further, in a case where the headland widths L are different depending on the sides of the farm field peripheral edge, the number of second auxiliary lines to be created may differ depending on the side. Further, the length of the second auxiliary lines can be changed as appropriate as in the case of the first auxiliary lines.

[0077] Next, the adjacent auxiliary line creation unit 37 determines whether or not the interval X between the outermost peripheral second adjacent auxiliary line 92 and the farm field peripheral edge is narrower than $\frac{1}{2}$ of the work width W1 or $\frac{1}{2}$ of the work machine width W2 (S204). Here, in a case where the interval X is narrower than $\frac{1}{2}$ of the work width W1, there is a possibility that the work will be performed outside the farm field and, in a case where the interval X is narrower than $\frac{1}{2}$ of the work machine width W2, there is a possibility that the work machine 3 will get outside the farm field. Therefore, in a case of Yes in Step S204, the adjacent auxiliary line creation unit 37 deletes the outermost peripheral second adjacent auxiliary line 92 (S205). Further, it is preferable to set the condition that the interval X is narrower than both, not either one, of $\frac{1}{2}$ of the work width W1 and $\frac{1}{2}$ of the work machine width W2. Note that, in a case of No in Step S204, the outermost peripheral second adjacent auxiliary line 92 will not be deleted.

[0078] Therefore, the number of second auxiliary lines to be finally created corresponds to “the value obtained by rounding down the decimal places of the headland width L divided by the auxiliary line interval S or the value obtained by subtracting 1 from that value”. Further, in the configuration of the present embodiment, after the second adjacent auxiliary lines 92 are created under the condition of Step S203, whether or not it is necessary to delete the outermost peripheral second adjacent auxiliary line 92 is determined in Step S204. Alternatively, such a configuration in which the second adjacent auxiliary line 92 that satisfies the deletion condition of Step S204 is not created in the first place is also possible (in other words, it is also possible that a process similar to Steps S204 and S205 is incorporated in Step S203).

[0079] Next, a brief explanation is given of parallel movement of auxiliary lines. The first auxiliary lines are created with reference to the farm field peripheral edge. Therefore, for example, in a case where the position of the farm field peripheral edge is changed, the first auxiliary lines move in parallel accordingly. Further, since the first auxiliary lines correspond to each side of the farm field peripheral edge, for example, in a case where the position of one side of the farm field peripheral edge is changed, the positions of the first auxiliary lines corresponding to that side will be changed. Note that, for example, in a case where the headland width L is also changed, the processing of FIG. 6 will be performed again so that the first reference auxiliary lines 81 and the first adjacent auxiliary lines 82 will be created again.

[0080] Further, since the second auxiliary lines are different only in that the reference line is the work area peripheral edge, not the farm field peripheral edge, in a case where the position of the work area peripheral edge is changed, the same processing as with the first auxiliary lines will be performed.

[0081] Next, with reference to FIG. 11 and FIG. 12, an explanation is given of a specific flow of processing related to the work in the work area and the headland area. FIG. 11 is a flowchart illustrating the processing related to the work in the work area and the headland area. FIG. 12 is a diagram illustrating an image displayed on the wireless communication terminal 46 after paths are created.

[0082] After a registration of a farm field is completed, the user inputs information for creating a path for work in the work area and the headland area (for example, the work width W1, the work machine width W2, the work machine type, the start position, the end position, etc.) to the wireless communication terminal 46. Thereafter, the travel path creation unit 35 creates a travel path for work in the work area (S301). Further, the reference auxiliary line creation unit 36 and the adjacent auxiliary line creation unit 37 create auxiliary lines for work in the headland area (S302). Note that, in a case where the processes of Steps S301 and S302 is performed in advance, the wireless communication terminal 46 skips the processes of Steps S301 and S302 and firstly performs the process of Step S303.

[0083] In Step S302, such a configuration in which the wireless communication terminal 46 creates both first auxiliary lines and second auxiliary lines and such a configuration in which the wireless communication terminal 46 creates either first auxiliary lines or second auxiliary lines are both possible. Note that, in a case where either of the auxiliary lines are to be created, it is possible that the wireless communication terminal 46 (auxiliary line selection